Project Proposal-Group 2

1. What data will the group gather for incorporation into their database?
    a. **Stakeholder Topic:**
        i. The data that we will gather for incorporation into our database will be the live weight of the kidd, the average weight gain, birth date, tag number, gender, dam's tag number, and the previous health complications for the dam.
    b. **Personal Topic:**
        i. The data that we will gather for incorporation into our database will be the health complications of the dam, the kidd's average daily gain, the live weight, the dam's average daily gain, and the dam's tag number. These data will help us analyze the relationship between certain bloodlines and weight gain speed, determine the influence of genetic factors on the growth rate, and it will help us identify the bloodlines that showcase the most rapid and healthy weight gain.
2. What questions will they explore with the data?
    a. **Stakeholder Topic:**
        i. The questions that we will explore with the data will be how does the growth of different birth cohorts compare to each other and using that question, the data will also answer other questions such as, how were the goats raised in birth cohort compared to a different cohort?
    b. **Personal Topic:**
        i. The questions that we will explore with the data will be between the different bloodlines, how will the kidd grow, and if a certain bloodline is better than the other.

3. How the data could help them identify sustainability problems, and opportunities to propose positive cha

Our project aims to identify the average growth of the herd to help visualize what does and doesn't have an impact on the overall health of the goats. By allowing the user to compare growth rates of birth cohorts, it allows them to identify potential setbacks or harmful practices before it has a harmful effect on the goats. Additionally, it can help to identify what positive changes they made to improve the growth rates of their goats, and generally perform better "experiments" with clear outputs to compare between groups. It also will help to identify if there are any issues with food insecurity, and if any specific groups of goats are having issues with food enough to have a visible impact on their growth. By ensuring goats grow at a sustainable rate, it may allow them to eventually replace cows and other animals who tend to have unsustainable farming practices. For example, in many areas, cattle are fed corn as part of their diet due to the cheapness and abundance of it. However, cattle aren't evolved to eat corn and can result in bloat or acidosis since corn is slightly acidic and their stomachs aren't meant to deal with it. By replacing cows and other cattle with goats, not only can we reduce the need for them, but also avoid harmful feeding practices that cause both large productions of greenhouse gasses and health complications.

4. An overview of the sustainability issue you will be exploring, offering background on the problem, why i

Our project is strongly focused on supporting positive changes in goat farming practices, particularly at Silvies Valley Ranch. By analyzing data on the growth rates of different goat bloodlines, we aim to provide the ranch with valuable insights that could facilitate healthier and more sustainable breeding practices.

The data we gather will allow Silvies to visualize positive, sustainable growth rates. This not only promotes the well-being of the goats, but also contributes to the overall sustainability of the

ranch. By identifying and promoting bloodlines that exhibit high average daily gain and live weight, we can help the ranch maximize their productivity without resorting to unsustainable practices.

Furthermore, the data we gather could aid in the combat against potential wildfires. Goats are known for their natural foraging instincts, and by promoting healthy growth rates, we can support the expansion of the goat population at Silvies. This, in turn, could help control the vegetation growth and reduce the risk of wildfires.

Finally, our project promotes a natural and healthy way to raise goats. By building stronger immune systems, the goats are less likely to require medical intervention, reducing the use of antibiotics and other pharmaceuticals. This not only contributes to the sustainability of the ranch but also promotes the production of healthier meat for consumers.

5. Choose two representative user interactions with your completed project. Write a detailed textual

Stakeholder:

1. The system prompts for a birth cohort
2. The user would provide a valid birth cohort
3. The system validates the birth cohort
    3.1. The birth cohort is invalid
        3.1.1. The system gives an error message saying the given birth cohort is not in the database
        3.1.2. The user case starts at step 1
4. The system provides the user with the graph for that birth cohort showing the average growth rate

5. The system prompts for another cohort
6. The user would provide a different valid cohort
7. The system validates the birth cohort and checks if they are not the same
    7.1. The birth cohort is invalid
        7.1.1. The system gives an error message saying the given birth cohort is not in the database
        7.1.2. The user case starts at step 5
    7.2. The two birth cohorts are the same
        7.2.1. The system gives an error message saying the two birth cohorts are the same and cannot be compared.
        7.2.2. The user case starts at step 5
8. The system overlays the two graphs to allow the user to compare them

<u>Valid Birth Cohorts</u> - Only includes the years that are in the database

<u>Personal:</u>

1. The system prompts for a dam ID
2. The user would provide a valid dam ID
3. The system validates the dam ID
    a. The dam ID is invalid
        i. The system gives an error message saying the given dam ID is not in the database
        ii. The user case starts at step 1
4. The system provides the user with the graph for that dam ID's lineage showing the average growth rate

5. The system prompts for another dam ID
6. The user would provide a different valid dam ID
7. The system validates the dam ID and checks if they are not the same
    a. The dam ID is invalid
        i. The system gives an error message saying the given dam ID is not in the database
        ii. The user case starts at step 5
    b. The two dam IDs are the same
        i. The system gives an error message saying the two dam IDs are the same and cannot be compared.
        ii. The user case starts at step 5
8. The system overlays the two graphs to allow the user to compare them

Works Cited

Pollan, M. (2016). *The omnivore's dilemma: A natural history of four meals*. Penguin Books.